Laser goggles alter the perceived colour of drug labels, increasing the risk for drug errors

Harm from errors in drug administration remains a costly error for both the patient and health service, and the majority of cases are preventable. Various safety protocols have been developed to reduce drug errors, such as the SAFERSleep system (in use in the United Kingdom and New Zealand), which has been shown to reduce such errors in a prospective study. Part of this system incorporates the use of coloured drug labels.
Figure 1 demonstrates that the colours of drug labels are quite obvious in standard operating theatre white light. However, when viewed through a standard pair of orange argon goggles, distorted colour perception occurs (colour confusion). The blue, green, and grey become indistinguishable, and other colours also become harder to distinguish. This alteration in colour perception can be explained by the goggle light transmission characteristics affecting the wavelength of light reaching the eye. Although coloured drug labels are designed to reduce the risk for wrong drug administration, in the context of ophthalmic theatres where argon goggles are worn, the labels may increase the risk for error because 2 drugs with different coloured labels can be perceived as having the same colour.

Goggles used by urologists for laser lithotripsy with other lasers (coumarin green, alexandrite, holmium:YAG, neodymium:YAG, carbon dioxide, and potassium titanyl phosphate) can cause colour confusion, as demonstrated by the altered perception of colours in the Farnsworth-Munsell 100-Hue Test. The risk relating to coloured drug labels in ophthalmic theatres has not previously been highlighted.

We hope to reduce the risk for potentially harmful anaesthetic drug errors in ophthalmic theatres by raising awareness among all theatre staff that colour confusion (distorted colour perception) can occur when viewing the colour labels of anaesthetic drug labels with argon laser goggles.

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Intraocular cilium causing corneal endothelium cell deficiency

The presence of an intraocular cilium, whether it is resulted from penetrating injury or surgical intervention, is rare. Although it has been reported that they may remain in the eyes without causing any problem, they may also incite oculocutaneous complications such as uveitis, endophthalmitis, among others. We present a rare and interesting case of retained intraocular cilium embedded in the iris causing corneal endothelium cell deficiency.

A 29-year-old male had an intraocular foreign body in the right eye without any ocular discomforts. The vision of the right eye was 6/5, and the intraocular pressure was 12.7 mm Hg. The slit-lamp microscopy revealed a linear, full-thickness cornea scar and a foreign body resembling cilium in the anterior chamber with the proximal (follicle) end embedded in the superior iris (Fig. 1). The distal (tip) end of the cilium was free and curved (Fig. 2), and was noted to scratch the endothelium when the pupil constricted from light illumination. The corneal endothelium involved by the scratching of the tip of the cilium was hazed. No other abnormalities were found for the right eye.